

[16-03-65-18WSU] ATHABASCA OIL CORP.

Customer: PTRHTF20046
 QUADRA CHEMICALS
 12925 146TH STREET
 EDMONTON, AB T5L 2H6 CANADA
 Attn: Quadra Samples
 Tel:
 E-Mail: quadra_samples@quadra.ca

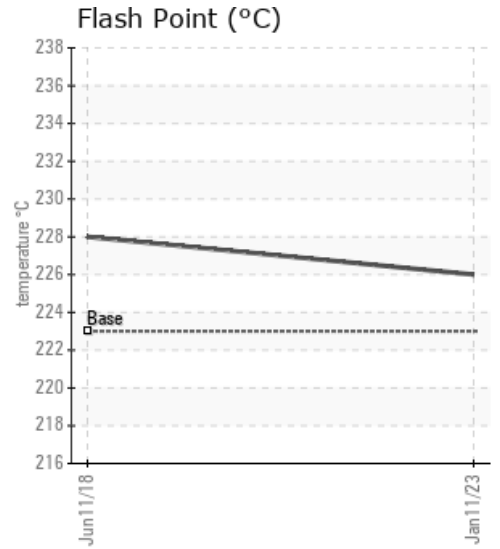
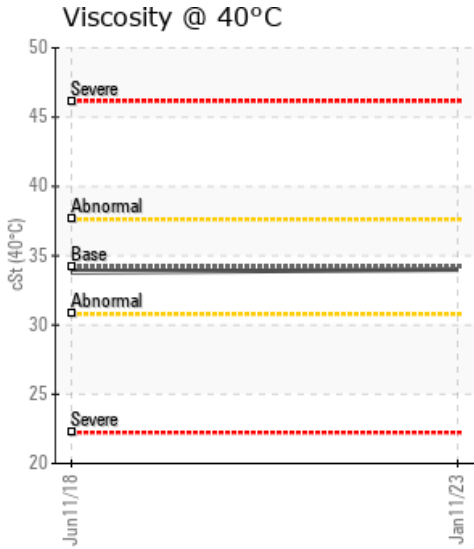
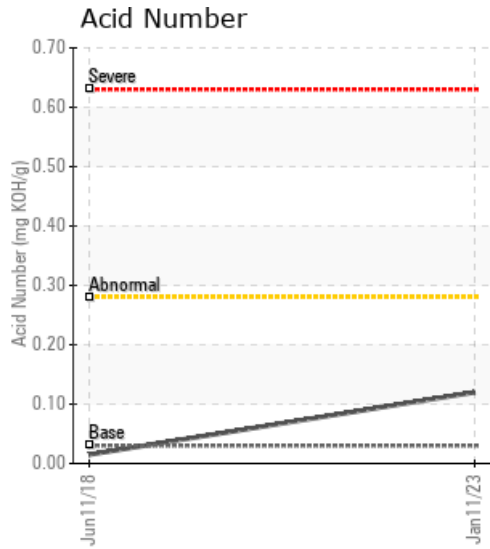
System Information
 System Volume: 0 gal
 Bulk Operating Temp: Not Specified
 Heating Source:
 Blanket:
 Fluid: PETRO CANADA PETRO-THERM
 Make:

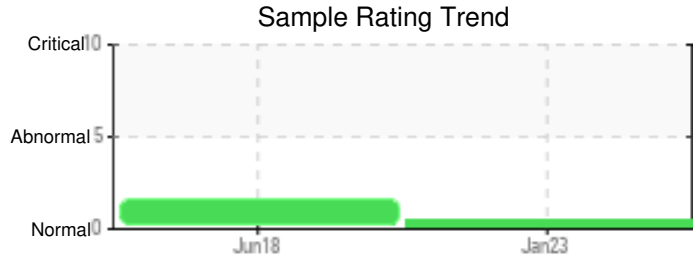
Sample Information
 Lab No: 02534809
 Analyst: Clinton Buhler
 Sample Date: 01/11/23
 Received Date: 01/20/23
 Completed: 01/25/23
 Clinton Buhler
 Clinton.Buhler@HFSinclair.com

Recommendation: Sample results indicate the fluid is in suitable condition for continued service. Please re-sample in 12 months.

Comments:

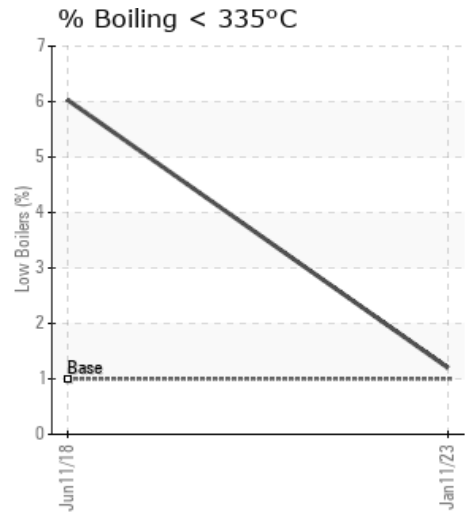
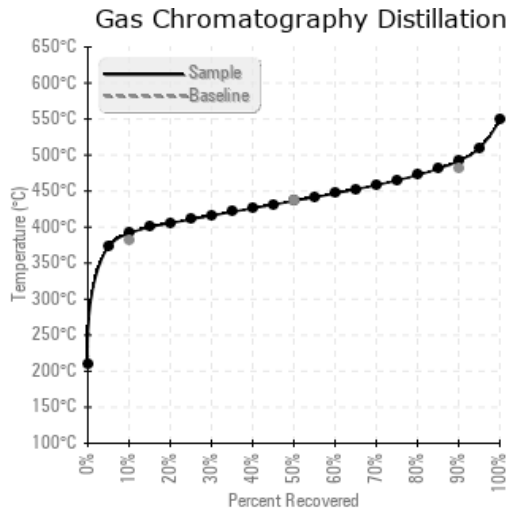
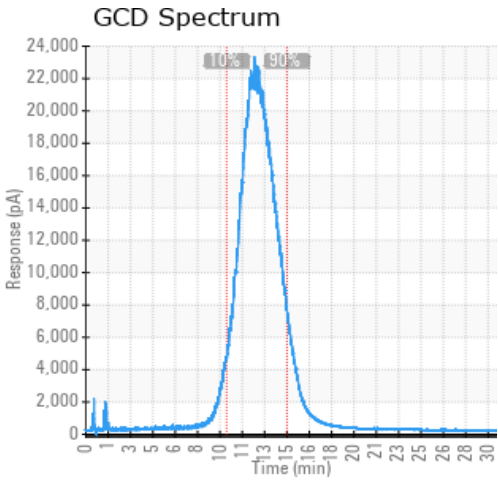
| Sample Date | Received Date | Fluid Age | Sample Location | Flash Point (COC) | Water (KF) | Viscosity (40°C) | Acid Number | Solids | GCD 10% | GCD 50% | GCD 90% | GCD % < 335°C |
|---------------|---------------|-----------|-----------------|-------------------|------------|------------------|-------------|--------|-----------|-----------|-----------|---------------|
| | mm/dd/yy | | | °F/°C | ppm | cSt | mg/KOH/g | %wt | °F/°C | °F/°C | °F/°C | % |
| 01/11/23 | 01/20/23 | 0.0y | 1279402-2 | 439 / 226 | 4.9 | 34.0 | 0.12 | 0.020 | 737 / 391 | 817 / 436 | 917 / 492 | 1.20 |
| 06/11/18 | 06/14/18 | 2.0y | 16-03-65-18WSM | 442 / 228 | 595.3 | 33.8 | 0.015 | 0.066 | 665 / 352 | 782 / 417 | 899 / 482 | 6.03 |
| Baseline Data | | | | 433 / 223 | | 34.2 | 0.03 | | 720 / 382 | 817 / 436 | 900 / 482 | 1.00 |





| Sample Date | Iron | Chromium | Nickel | Aluminum | Copper | Lead | Tin | Cadmium | Silver | Vanadium | Silicon | Sodium | Potassium | Titanium | Molybdenum | Antimony | Manganese | Lithium | Boron | Magnesium | Calcium | Barium | Phosphorus | Zinc |
|---------------|------|----------|--------|----------|--------|------|-----|---------|--------|----------|---------|--------|-----------|----------|------------|----------|-----------|---------|-------|-----------|---------|--------|------------|------|
| 01/11/23 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06/11/18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Baseline Data | | | 0 | 0 | | | | | | 0 | | 0 | 0 | | | | | 0 | | | | 0 | | |

Elemental analysis results (above) in parts per million (ppm). [10,000 ppm = 1.0%]



Historical Comments

| | |
|----------|---|
| 06/11/18 | The water content of the fluid is elevated. It is recommended to boil off the water. The fluid shows indications of thermal degradation. % low boiler vapor (<335C.) is high and 10% GCD temperature low. The fluid is suitable for further use. Water contamination levels are marginally high. Water contamination levels are marginally high.. ppm Water contamination levels are marginally high. (GCD) % < 335°C is abnormally high. (GCD) 10% Distillation Point is abnormally low. (GCD) 90% Distillation Point is abnormally low. |
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